IN THE SPECIFICATION

Please amend the specification as shown in the substitute specification. The substitute specification corrects numerous typographical and grammatical errors. No new matter is added in the substitute specification.

IN THE FIGURES

A copy of Figures 1, 7 and 8, amended portions being marked in red, is enclosed and accompanied by a Request to Amend Drawings Under 37 CFR § 1.121, contained herewith. In Figure 1, the caption "PRIOR ART" has been added. In Figures 7 and 8, reference character 60 has been replaced by reference character 56. In Figure 8, missing reference characters 42a, 42b, 42c, 48, 50, and 54 have been added, as well as lead lines for reference characters 42a, 42c and 48. No new matter has been added by these changes to the drawings.

IN THE CLAIMS

Claims 6, 8-10, and 14-16 were withdrawn by the Examiner in the Office Action dated 7/27/01. Please cancel Claim 2. Please amend Claims 1, 3-5, 7, 11-13, and 17-20 as follows:

B1

1. A medical assembly for local delivery of a therapeutic substance to an internal body tissue target area comprising:

(a) a catheter having a distal end and a proximal end;

(b) a delivery lumen extending from the distal end of the catheter to the proximal end of the catheter for the delivery of a therapeutic substance;

(c) a first transducer, for creating an energy, supported at the distal end of the catheter by a number of anchoring points, wherein an inner surface of the transducer is positioned at a distance from an outer surface of the catheter, wherein the distance defines a gap between the outer surface of the catheter and the inner surface of the transducer; and

B1

(d) a low density material contained in the gap for reflecting the energy from the gap toward the body tissue target area.

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3. The medical assembly of Claim 1, wherein the low density material is selected from the group consisting of ambient air, oxygen, nitrogen, helium, open-cell polymer foam, closed-cell polymer foam and mixtures thereof.

B2

4. The medical assembly of Claim 1, wherein the transducer comprises a hollow tubular shaped body, and wherein the catheter is extended through the hollow body.

5. The medical assembly of Claim 1, wherein the distance is greater than about 25 μm in length.

B3

7. The medical assembly of Claim 1, wherein the therapeutic substance is selected from a group consisting of antineoplastic, antiinflammatory, antiplatelet, anticoagulant, fibrinolytic, thrombin inhibitor, antimitotic, and antiproliferative substances and mixtures thereof.

11. The medical device assembly of Claim 1, further comprising:

a second transducer supported by the distal end of the catheter assembly, each transducer having a proximal end and a distal end, wherein the distal end of the first transducer is positioned at a distance from the proximal end of the second transducer.

B4

12. A medical assembly for local delivery of a therapeutic substance to an internal body tissue target area comprising:

(a) a catheter having a distal end and a proximal end;

(b) a delivery lumen extending from the distal end of the catheter to the proximal end of the catheter for the delivery of a therapeutic substance; and

(c) a plurality of transducers supported at the distal end of the catheter, each transducer having a proximal end and a distal end, wherein the distal end of a transducer is positioned at a distance from the proximal end of an adjacent transducer to allow the catheter to bend in the area between the pair of adjacent transducers.

B4

13. The medical assembly of Claim 12, wherein each of the plurality of transducers are supported by the catheter by a number of anchoring points, wherein an inner surface of each transducer is positioned at a distance from an outer surface of the catheter, wherein the distance defines a gap between the outer surface of the catheter and the inner surface of the transducer.

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17. A method for delivering a therapeutic substance to an internal body tissue target area comprising the acts of:

(a) providing a catheter having a distal end and a proximal end, and further having a delivery lumen, said delivery lumen extending from the distal end of the catheter to the proximal end of the catheter for delivery of a therapeutic substance;

B5

(b) further providing a transducer, for creating an energy, supported at the distal end of the catheter by a number of anchoring points, wherein an inner surface of the transducer is positioned at a distance from an outer surface of the catheter, the distance defining a gap between the outer surface of the catheter and the inner surface of the transducer, the gap containing a low density material for reflecting the energy from the gap towards the target area;

(c) positioning said catheter proximate the internal body tissue target area;

(d) causing a therapeutic substance to elute from the delivery lumen at the distal end of the catheter; and

(e) transmitting an electrical signal to the transducer for creating the energy.

18. The method of Claim 17, wherein the therapeutic substance is selected from a group consisting of antineoplastic, antiinflammatory, antiplatelet, anticoagulant, fibrinolytic, thrombin inhibitor, antimitotic, and antiproliferative substances and mixtures thereof.

19. A method of treating an internal body tissue with a therapeutic substance comprising:

(a) locally delivering the therapeutic substance in the vicinity of the internal body tissue;

(b) generating ultrasonic energy in the vicinity of the internal body tissue, wherein the ultrasonic energy is generated by a transducer; and

(c) adjusting the ultrasonic energy by manipulating an electronic signal applied to the transducer, wherein the electronic signal is oscillated approximately equal to the mechanical resonance frequency of the transducer.

20. A method according to Claim 19, further comprising:

amplifying the ultrasonic energy by interposing a gap between a catheter for delivering the therapeutic substance and the transducer for generating the ultrasonic energy.

Please add Claims 21-33 as follows:

-- 21. The method of Claim 17, wherein the electrical signal has a frequency greater than about 20 kHz.

22. The method of Claim 17, wherein the electrical signal has a voltage greater than about 94.8 V.

23. The method of Claim 19, wherein the electrical signal has a frequency greater than about 20 kHz.

24. The method of Claim 19, wherein the electrical signal has a voltage greater than about 94.8 V.

B6

25. A medical device comprising:

a lumen for inserting in a body passageway; and

a first transducer supported by the lumen, the first transducer having a first end and a second end;

a second transducer supported by the lumen, the second transducer having a first end and a second end, wherein the first end of the second transducer is positioned at a distance from the second end of the first transducer so as to allow the lumen to be flexible in the area between the second end of the first transducer and the first end of the second transducer.

26. The medical device of Claim 25, additionally including an enclosed gap region located between the first transducer and the lumen, the enclosed gap region containing a substance.

27. The medical device of Claim 26, wherein the substance is selected from a group consisting of ambient air, oxygen, nitrogen, helium, open-cell polymer foam, closed-cell polymer foam and mixtures thereof.

28. A medical device comprising:

a transducer for emitting an energy, the transducer having a hollow body;

a lumen disposed through the hollow body, wherein a first region and a second region of the hollow body are sealed against the lumen to create an enclosed space region; and

a substance contained in the enclosed space region for directing the energy transmitted from the transducer away from the lumen.

29. The medical device of Claim 28, wherein the transducer is a piezoelectric crystal.

30. The medical device of Claim 28, wherein the substance is selected from a group consisting of ambient air, oxygen, nitrogen, helium, open-cell polymer foam, closed-cell polymer foam and mixtures thereof.

31. The medical device of Claim 28, wherein the lumen is part of a catheter assembly.

32. The medical device of Claim 13, additionally including a substance contained in the gap.

33. The medical device of Claim 13, additionally including a low density material contained in the gap. --

REMARKS

This is a response to the Office Action dated July 27, 2001.

With regard to the objections to the drawings, in Figures 7 and 8, the balloon does not surround the tissue. Reference character 60 was a typographical error and should be reference character 56. Furthermore, there is no Figure 9. "Figure 9" on Page 14, line 16 was a typographical error and should be "Figure 5A." Further, Figure 1 is now labeled as "PRIOR ART."

With regard to the objections to the disclosure, appropriate changes have been made to the specification to correct the typographical errors. "Delivery/electrical lumen" corresponds to reference numeral 32. "Catheter tube" corresponds to reference numeral 36. "Distal end" corresponds to reference numeral 44. "Distal portion" corresponds to reference numeral 57.